Figure 1

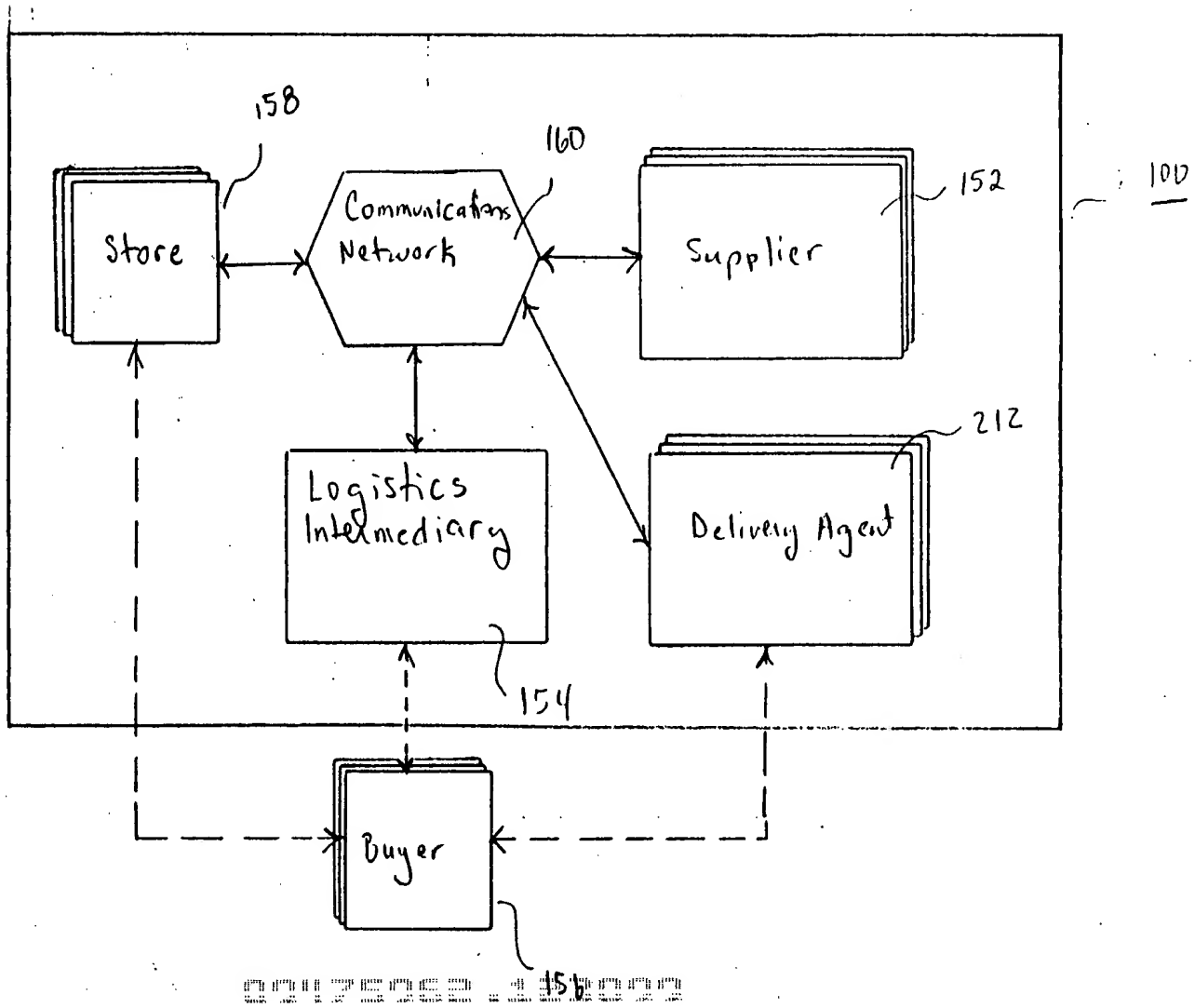
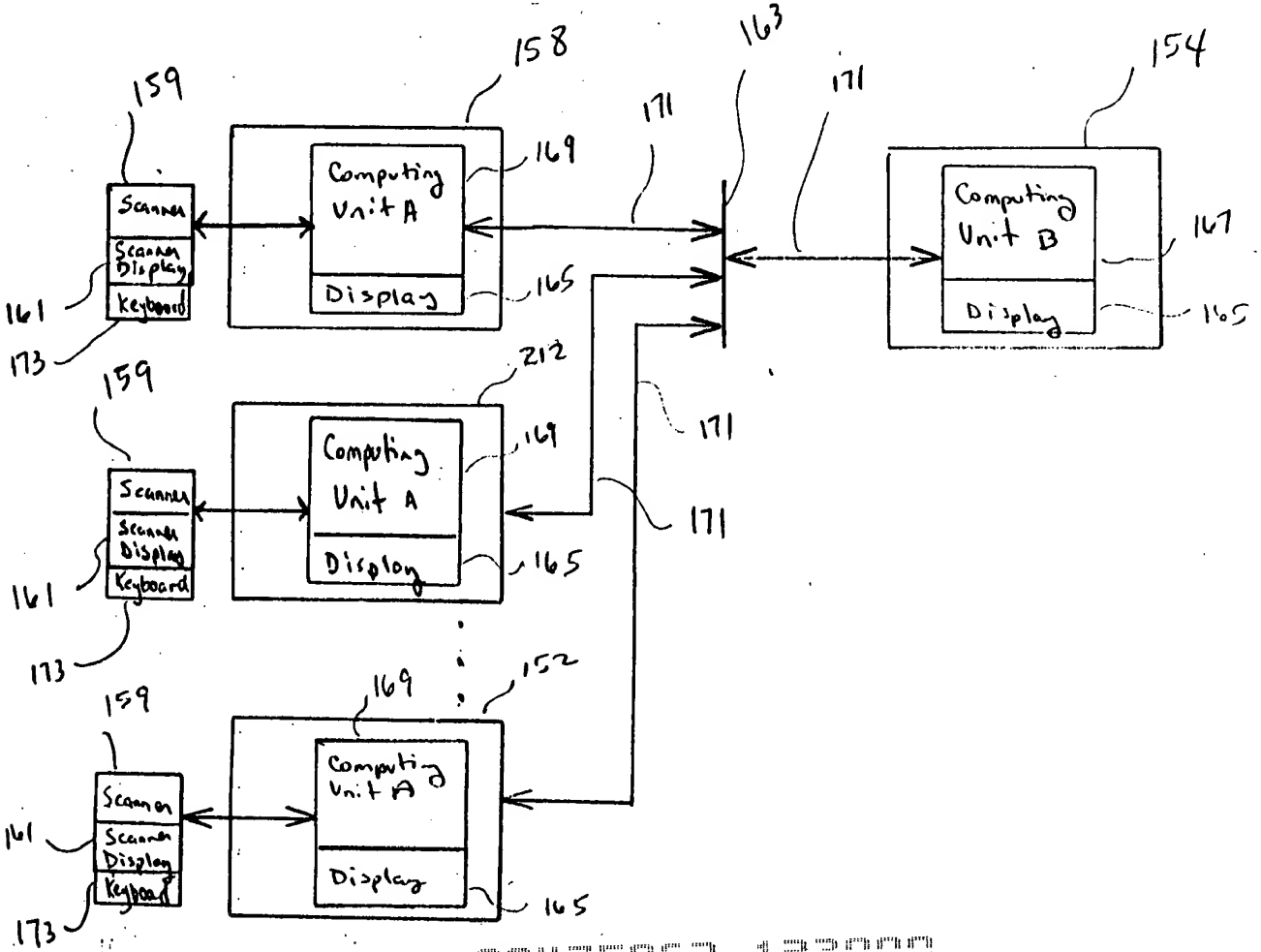

158
160
Store
Communications Network
Supplier
152
100
212
Logistics Intelmediary
Delivery Agent
154
Buyer
156

Figure 2


158
163
154
159
171
171
169
Computing Unit A
Scanner
Scanner Display
Keyboard
Display
161
173
165
Computing Unit B
167
165
212
159
171
169
Computing Unit A
Scanner
Scanner Display
Keyboard
Display
161
173
165
171
152
159
169
Computing Unit A
Scanner
Scanner Display
Keyboard
Display
161
173
165

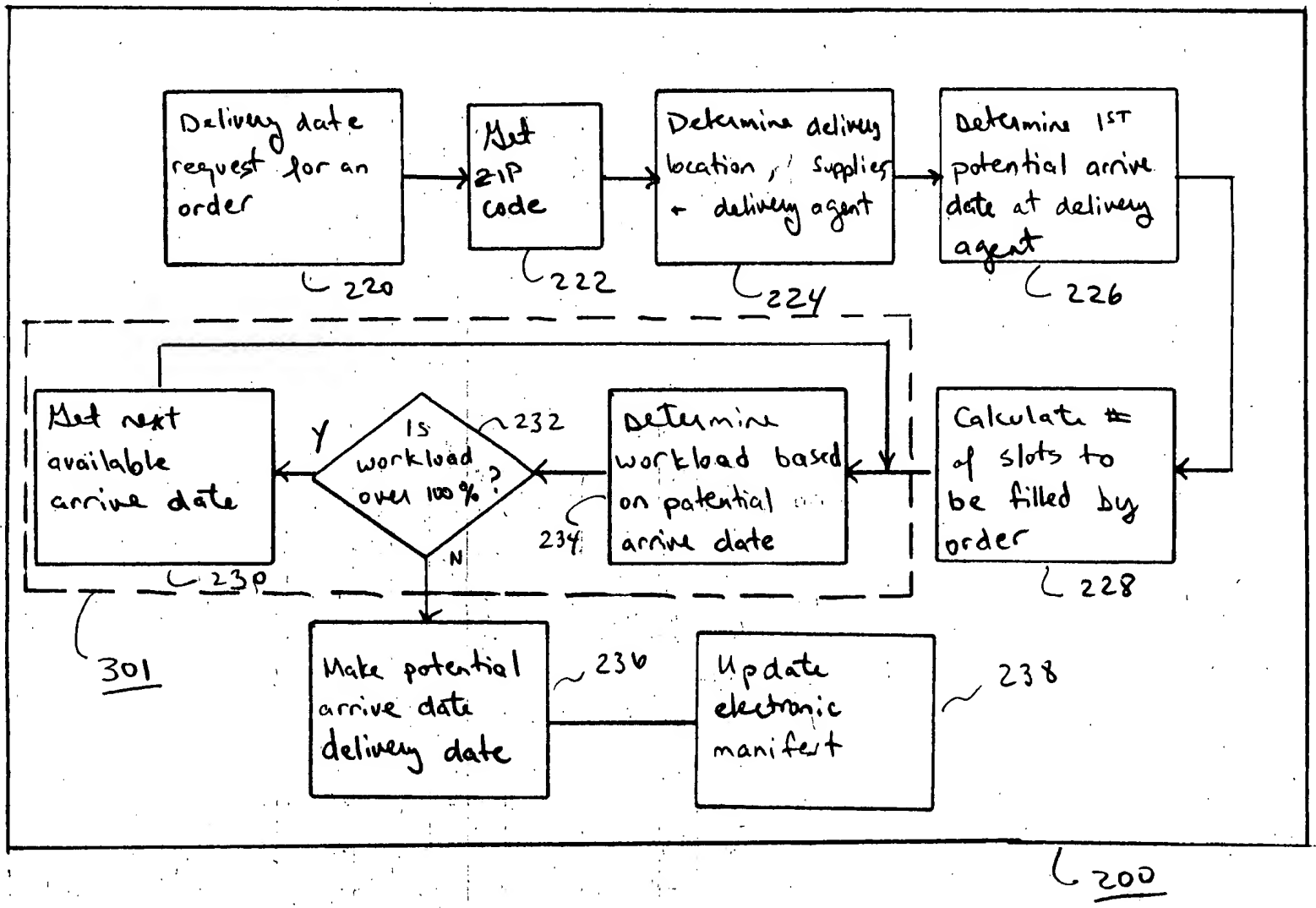
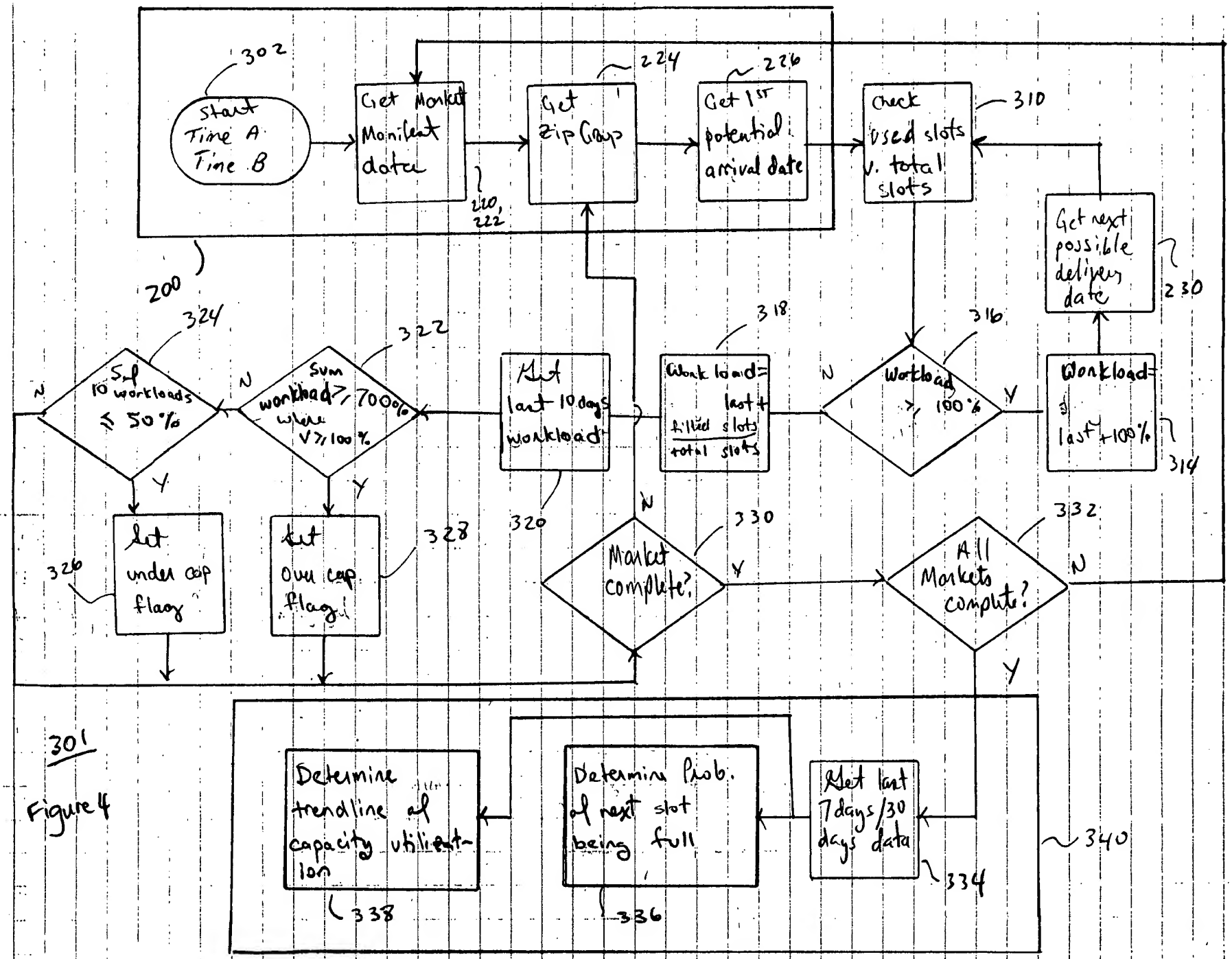

Delivery date request for an order
220
Get ZIP code
222
Determine delivery location / Supplier + delivery agent
224
Determine 1ST potential arrive date at delivery agent
226
Calculate # of slots to be filled by order
228
Determine workload based on potential arrive date
234
Is workload over 100%?
232
Y
N
Get next available arrive date
230
301
Make potential arrive date delivery date
236
Update electronic manifest
238
200

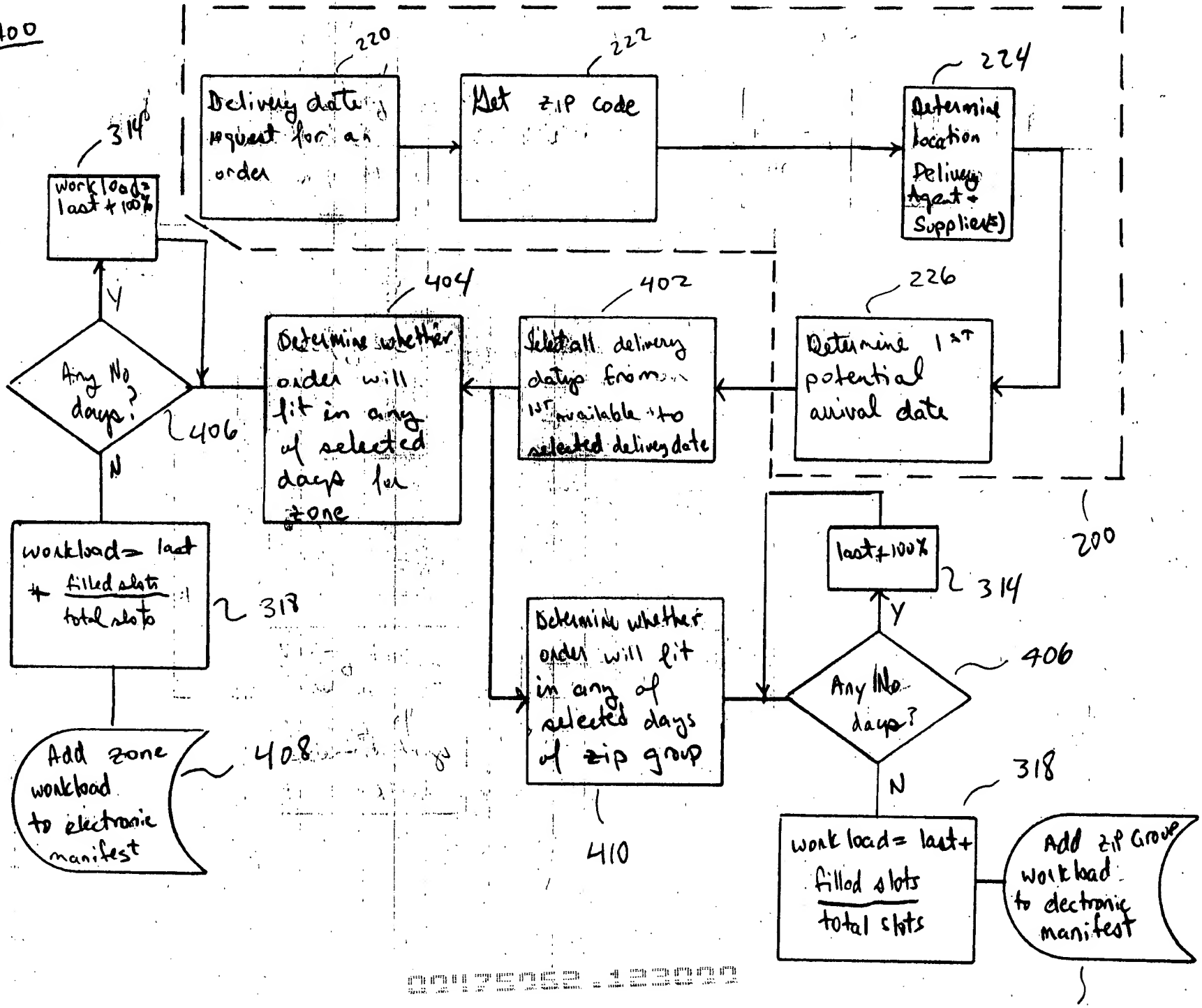
Figure 3


302
Start
Time A
Time B
Get Market Monileat data
220, 222
224
Get zip Group
226
Get 1st potential arrival date
310
Check Used slots v. total slots
Get next possible deliver date
230
200
324
322
318
316
Sum workload > 700% where V > 100 %
Set last 10 days workload
Workload = last + filled slots / total slots
Workload > 100 %
Workload = last + 100 %
314
Sum 10 workloads ≤ 50 %
Y
N
Set under cap flag
326
Set over cap flag
328
320
Market complete?
330
332
All Markets complete?
Determine trendline of capacity utilization
338
Determine Prob. of next slot being full
336
Get last 7 days/30 days data
334
340

301

Figure 4

Figure 5


400
220
Delivery date request for an order
222
Get zip code
224
Determine location Delivery Agent + Supplier(s)
314
workload = last + 100%
Y
Any No days?
406
N
workload = last + filled slots / total slots
318
Add zone workload to electronic manifest
408
404
Determine whether order will fit in any of selected days for zone
402
Select all delivery days from 1st available to selected delivery date
226
Determine 1st potential arrival date
200
last + 100%
314
Y
Any No days?
406
N
318
workload = last + filled slots / total slots
Add zip Group workload to electronic manifest
Determine whether order will fit in any of selected days of zip group
410